



U.S. Department of Energy's Recovery Act Spending

December 2009

Overview

The [American Recovery and Reinvestment Act of 2009](#) (Recovery Act or ARRA) is the economic stimulus package passed by Congress on February 13, 2009 and signed by President Obama four days later. The package totals nearly \$787 billion, delivered through a combination of federal tax cuts, expansion of social welfare provisions including unemployment benefits, and domestic spending to advance economic recovery and create new jobs as well as save existing ones. About \$63 billion from the Recovery Act is targeted for energy, transportation, and climate research spending, with an additional \$21 billion in climate-energy tax incentives.¹ This funding provides an unprecedented government investment in clean energy in the United States and some of these projects are expected to contribute to economic growth for many years. For example, ARRA provides \$5 billion over two years for the weatherization of low-income family homes – a five fold increase in the Department of Energy’s weatherization funding.² Recovery money for climate and energy is distributed among a handful of federal agencies with jurisdiction over key areas, such as transportation, but the majority of energy spending is through [the U.S. Department of Energy](#) (DOE).

The DOE received \$36.7 billion of the climate and energy related funds, with nearly \$33 billion for direct grants and the remainder for loan guarantees. The money is divided among the following DOE offices: the Office of Energy Efficiency and Renewable Energy (EERE); Office of Environmental Management (EM); Office of Electricity Delivery and Energy Reliability (OE); Office of Fossil Energy (FE); Office of Science (SC); Loan Guarantee Program Office (LGPO); the Advanced Research Projects Agency (ARPA-E); Western Area Power Administration (WAPA); and Department Administration (DA).

The following terms are used by the DOE and throughout this brief to describe where DOE Office recovery funds are in the process of disbursement and spending. Funds that are *appropriated* are made available by Congress for a specific purpose; funds that are *awarded* are committed to a specific project or activity and will likely result in payment; funds that are *spent* have been paid to the recipient.

To date,³ only 3.9% of the DOE’s total appropriated ARRA funds have been spent and 55.7% of total funds have been awarded.

¹ Pew Center on Global Climate Change, “[Key Provisions: American Recovery and Reinvestment Act.](#)”

² Alliance to Save Energy, “[Stimulus Guidance Summary: Weatherization Assistance Program \(WAP\).](#)”

³ [US Department of Energy Recovery and Reinvestment](#), updated monthly, all numbers in this brief are from November 13, 2009.

Individual Office Spending⁴

- **Office of Energy Efficiency and Renewable Energy (EERE)**
 - The EERE Office has \$16.8 billion in ARRA funding, which it has allocated among specific project areas.
 - Approximately \$11 billion or 64% of EERE's recovery funds has been awarded.
 - The majority of the awarded money (90.1%) has gone to increase spending through existing state and local government energy programs, most of which concentrate on efficiency measures.
 - The EE Conservation Block Grant Program (\$3.2 billion), State Energy Program (\$3.1 billion), and Weatherization Assistance Program (\$5 billion) are the most heavily funded of state energy initiatives⁵; taken together these three programs account for 99% of current EERE awards for state governments and agencies.
 - Only 2.2% of available ARRA funds have been spent or paid to awardees.
 - A few sources for the delay in spending should be noted for the major state energy initiatives. The [National Environmental Policy Act](#)⁶, Davis-Bacon Wage Determinations, and ARRA's Buy American terms have significantly slowed spending of the State Energy Program and EE Conservation Block Grant Program funds as the awards are generally "conditioned" on further action based on these requirements. Spending for the Weatherization Assistance Program has specifically been held up by the Davis-Bacon wage rate, which was not established until late summer 2009.

The following charts give a breakdown of how the recovery funds for the EERE Office have been appropriated and awarded by project category to date.⁷

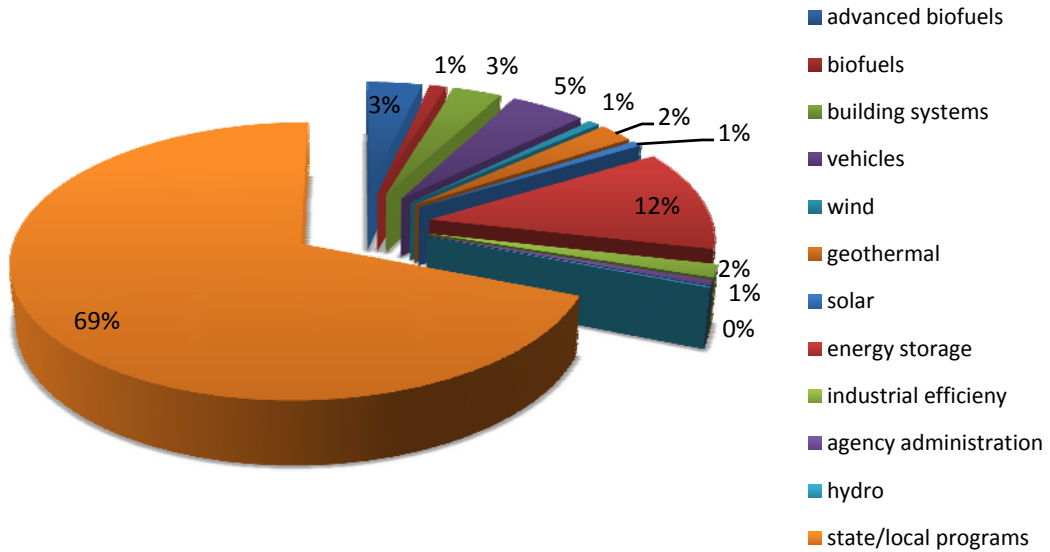
⁴ This snapshot of individual office spending is for the \$32.7 billion in direct grants and program funding, and does not include the \$4 billion for the Loan Guarantee Office.

⁵ State energy initiatives also include: Community Renewable Energy Deployment, Weatherization Innovation Pilot Program, and the EE Appliance Rebate Program.

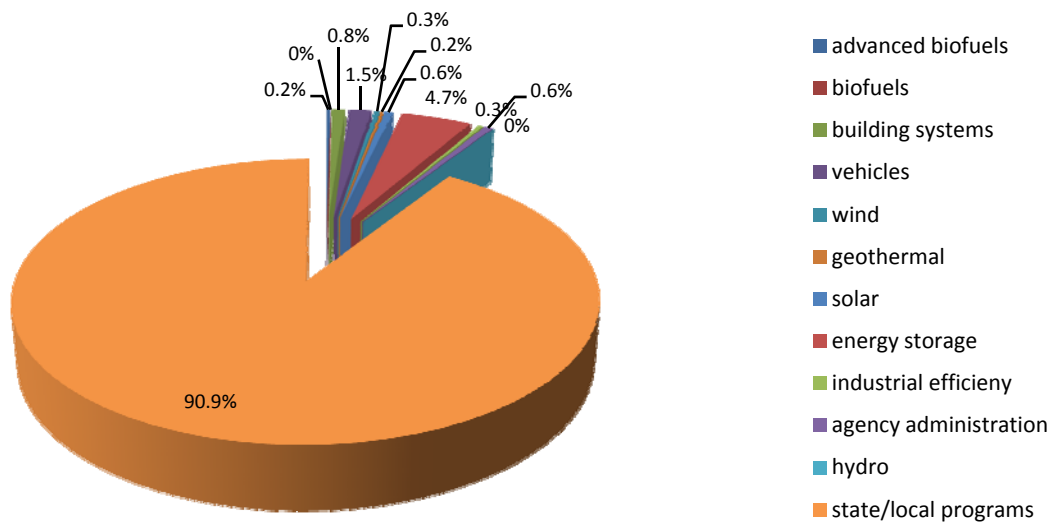
⁶ The National Environmental Policy Act passed in 1969 and set up procedural requirements for all federal government agencies to prepare Environmental Assessments (EAs) and Environmental Impact Statements (EISs) detailing the environmental effects of proposed federal agency actions,

⁷ [US Department of Energy Recovery and Reinvestment](#), November 13, 2009. The Pew Center categorized projects by type for Charts 1, 2, 3, and 4; details of categorization and calculations available upon request.

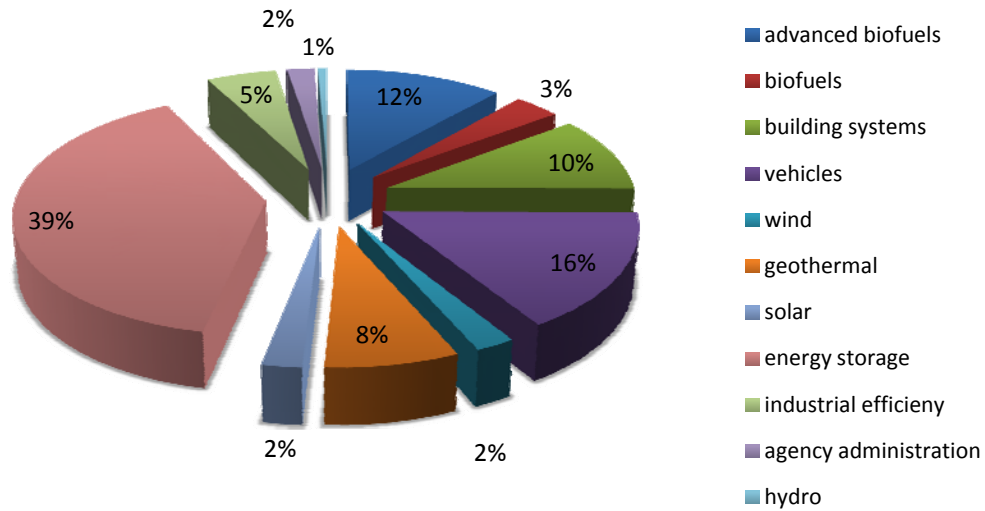
EERE Appropriated Projects



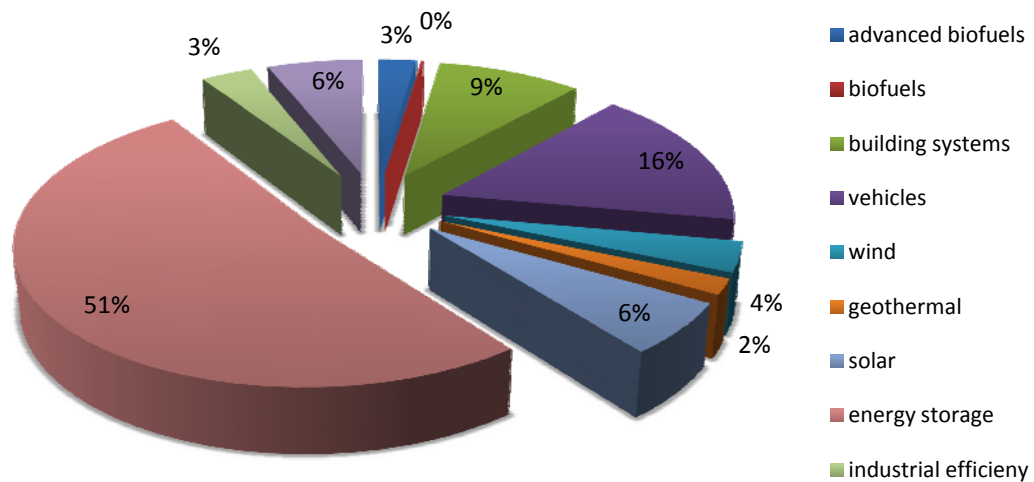
EERE Project Awards



EERE Appropriated Projects (not including State&Local Govt. Programs)



EERE Project Awards (not including State&Local Govt. Programs)



- **Office of Environmental Management (EM)**
 - The EM Office has \$6.0 billion in ARRA funding, and \$5.8 billion or 96% of available ARRA funds has been awarded.
 - The EM Office is utilizing these funds to accelerate environmental cleanup work, including cleanup of soil and groundwater, transportation and disposal of waste and demolishing former weapons complex facilities.
 - 13.5% of available funds have been spent.

- **Office of Electricity Delivery and Energy Reliability (OE)**
 - The OE Office has \$4.5 billion in ARRA funding, and \$110 million or 3% of available ARRA funds has been awarded.
 - So far, stimulus money for the OE Office has mostly gone toward unfunded provisions in the [Energy Independence and Security Act \(EISA\) of 2007](#) that aim to improve transmission and develop the smart grid. Specific EISA provisions receiving funds are: Interoperability Standards and Framework (EISA 1305), which aims to set development and implementation standards for Smart Grid technologies to ensure effective and consistent application; Smart Grid Investment Grant Program (EISA 1306), which creates a competitive, merit-based matching-funds grant program that will cover up to 50 percent of investments planned by electric utilities and other entities for the deployment of Smart Grid technology; and the Smart Grid Regional and Energy Storage Demonstration Project (EISA 1304), which solicits and funds projects through competitive funding opportunity announcements (FOA) for large-scale Smart Grid demonstration projects that will verify technology viability, quantify costs, and validate Smart Grid business models at scale so they can be replicated.
 - Only about 0.3% of available ARRA funds have been paid to awardees.

- **Office of Fossil Energy (FE)**
 - The FE Office has \$3.4 billion in ARRA funding, and \$111 million or 3.2% of available funds has been awarded.
 - In general, FE Office Recovery Act initiatives focus on research, development and deployment of technologies to use coal more cleanly and efficiently. Investments will go toward finding and testing new ways to produce energy from coal gasification, and improving techniques to capture and store the emissions from coal-fired power plants. The majority of appropriated funds (74%) are designated for carbon capture & storage and industrial carbon capture and storage applications.
 - FE projects have been very slow to get off the ground – about 0.1% of available ARRA funds have been spent.

- **Office of Science (SC)**
 - The SC Office has \$1.6 billion in ARRA funding, and \$1.4 billion or 86% of available funds has been awarded.
 - Nearly 40% of the money awarded so far will go to the Energy Frontier Research Centers, Science Laboratories Infrastructure Construction, and National Synchrotron Light Source II. The Energy Frontier Research Centers fund university-led basic research for the transformative energy technologies of the future. The rest of the awarded money is distributed among 49 specific lab facilities and project areas.
 - Additionally, 6% of SC's total funds are appropriated for Energy Sciences Fellowships and Early Career Awards – a project that aims to stimulate research careers in energy, environmental, and climate change sciences.
 - About 6.2% of available ARRA funds have been paid to awardees.

- **Advanced Research Projects Agency (ARPA-E)**
 - ARPA-E has \$389 million available in ARRA funding, and \$151 million or 39% has been awarded.
 - ARPA-E was established under the [America Competes Act of 2007](#) as a new agency within the DOE that aims to fund cutting-edge energy and climate research. The Recovery Act gives the agency its initial funding.
 - On October 26th, 2009, ARPA-E announced the 37 project winners from its first solicitation. Lead recipients are small businesses (43%), educational institutions (35%), and large businesses (19%). Projects span transformative technologies in energy storage, carbon capture, biofuels, renewable power and other areas. Awards are going to high risk and high payoff ideas and technologies in all stages of development.
 - Only 0.2% of available funds have been paid to awardees.

- **Western Area Power Administration (WAPA)**
 - The WAPA Office has \$10 million in ARRA funding, and \$2.2 million or 22% of ARRA funds have been awarded.
 - The Recovery Act provides WAPA the authority to construct transmission lines to help deliver renewable resources to market and, importantly, provides a source of funds for this activity.
 - 17.4% of available funds have been spent.

Jobs Created or Saved by DOE Recovery Spending

According to the U.S. government, as of October 30, 2009, 9,957 jobs have been created or saved by the DOE's use of recovery funds.⁸ Data is compiled from Recipient Reports by the Bureau of Labor Statistics. The following table shows the ten states with the highest jobs numbers so far.

Rank	State	Jobs Created/ Saved
1	OH	2,373.55
2	WA	1,078.46
3	SC	985.34
4	ID	672.43
5	CA	520.06
6	TN	472.74
7	MN	333.22
8	NM	328.69
9	NY	271.48
10	CO	237.28

The data on job creation reported by the federal government has been questioned as it relies on recipient estimates of jobs created or saved. While there is a set of reporting requirements and guidance for recipients, a report submitted by the U.S. Government Accountability Office (GAO) at a House Oversight and Government Reform hearing held November 19th entitled "Tracking the Money: How Recovery Act Recipients Account for Their Use of Stimulus Dollars," indicates that "there are a range of significant reporting and quality issues that need to be addressed."⁹ GAO's review found errors in data entry such as recipients failing to indicate the stimulus dollar amount received or expended and incorrectly labeling the Congressional District where the project or activity took place. Additionally, recipient calculation errors in determining full-time equivalent (FTE) positions have been identified. As recipient reports continue to be submitted each quarter, GAO recommends the U.S. Office of Management and Budget clarify its guidance for measuring FTEs and work with federal agencies to examine review and quality assurance procedures.

A Congressional Budget Office (CBO) report, the Estimated Impact of the American Recovery and Reinvestment Act on Employment and Economic Output as of September 2009, was released in November 2009 and provides estimates which the CBO considers more comprehensive than those in recipient reports. CBO used economic models and historical data to estimate that ARRA increased the number of people employed by between 600,000 and 1.6 million compared to what employment figures

⁸ Recovery.gov. Jobs numbers from October 30, 2009.

<http://www.recovery.gov/pages/textview.aspx?data=homeMapRecipient>.

⁹ U.S. Government Accountability Office (GAO), "Recovery Act: Recipient Reported Jobs Data Provide Some Insight into Use of Recovery Act Funding, but Data Quality and Reporting Issues Need Attention," November 2009.

would have been otherwise.¹⁰ In comparison, the estimate for all jobs created or saved by ARRA compiled from recipient reports is approximately 640,000. The CBO report also details factors that affect the accuracy of recipient report data.¹¹ The CBO numbers are for ARRA funds going to all agencies and are not broken down by agency or sector.

The percentages for DOE office spending and project category appropriations and awards will continually change as more project solicitations are announced and more money is awarded and spent. Jobs data will also fluctuate as submitted reports are verified and guidelines for recipient reporting are improved.

The Pew Center will continue to update this brief as more information becomes available.

¹⁰ Congressional Budget Office (CBO), "[Estimated Impact of the American Recovery and Reinvestment Act on Employment and Economic Output as of September 2009](#)," November 2009.

¹¹ This includes factors that could make reported figures too high, for example that recipient reports may include employment that would have occurred without ARRA, as well as too low, such as that the reporting requirement is limited to primary and secondary recipients of funds and does not account for lower level recipients.